A global investigation of music listening practices: The influence of country latitude and seasons on music preferences

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Background

Most research on correlates of music preference considers micro-level influences, such as personality and social positional levels (Rentfrow & Gosling, 2003; North & Hargreaves, 1996). However, it is important to consider macro-level influences, such as cultural norms and the effects of time and weather, as well. An interesting macro-level influence that is gaining research attention is the consideration of seasonal effects (Helmholz, et al., 2017; Krause & North, 2018; Park, et al., 2019). For example, Krause and North's (2018, p. 89) research demonstrated that listeners preferred "arousing music for the warmer months, serene music for spring, and melancholy music for the cooler months".

Aims

The present study is a replication-extension study of Krause and North's (2018) research. The aims of the present study included:

- 1. Replicating their findings drawing on a larger, global sample (including non-western countries and those with varying weather patterns and at different latitudes).
- 2. Exploring the extent that proxies for country and seasons (latitude) modulate response patterns.

Method

A total of 2,140 participants from 47 countries across 4 continents completed an online questionnaire, which consisted of answering background questions and responding to a series of questions concerning the creation of music playlists. Importantly, as in Krause and North (2018), participants rated how well 24 adjectives (from three factors: Arousing, Serene, and Melancholy) describe preferred music for playlists (for each season); also, they indicated their favourite season, the season they were currently experiencing, and their country of residence.

Results

Addressing the first aim, an exploratory factor analyses was conducted on the participants' adjective ratings to replicate that reported in Krause and North (2018). The results indicated that the proposed three factor solution on each of the four seasons from Autumn to Summer does not fit the data well using either the Comparitive Fit Index (0.79, 0.79, 0.81, 0.83) or Tucker Lewis Index (0.83, 0.83, 0.84, 0.86). We posit this model fit incongrunacy is due to initial model specification choices.

Nevertheless, we continued our planned analyses and considered the impact of the participants' country of residence. We tested the hypothesis that preferred arousal levels in music fluctuate according to the ecological environment: could countries with warmer summers prefer higher arousal music for warmer (summer) seasons, and countries with colder winters prefer lower arousal (melancholic) music for cooler (winter) seasons? Using mixed effects models with random effects for country, we found that countries with more extreme latitudes (warmer summers) preferred higher arousal music (b = -0.05, p = .036) for summer. However, no significant effect was observed for latitude and low arousal (melancholic) music (b = -0.03, p = .11).

Conclusions

By examining the replicability of Krause and North's (2018) findings on a larger set of participants and countries, the present research contributes to the developing body of psychological research on music preference at the macro-level, focusing on contributing to our understanding of how broader factors play a role in music preference and everyday listening behaviours. Moreover, the findings will be considered relative to research concerning seasonal variations in other behaviours and experiences, which may have additional influences on areas such as financial behaviours, aggression, mental health, and mood.

References

Helmholz, P., Siemon, D., & Robra-Bissantz, S. (2017). Summer hot, winter not! – Seasonal influences on context-based music recommendations. Paper presented at the Australasian Conference on Information Systems, Hobart, Australia.

Krause, A. E., & North, A. C. (2018). 'Tis the season: Music playlist preferences for the seasons. *Psychology of Aesthetics, Creativity, and the Arts, 12*(1), 89-95. https://doi.org/10.1037/aca0000104

North, A. C., & Hargreaves, D. J. (1996). Situational influences on reported musical preference. *Psychomusicology: A Journal of Research in Music Cognition*, *15*, 30–45. <u>http://dx.doi.org/10.1037/h0094081</u>

Park, M., Thom, J., Mennicken, S., Cramer, H., & Macy, M. (2019). Global music streaming data reveal diurnal and seasonal patterns of affective preference. *Nature Human Behaviour*, *3*(3), 230-236. <u>https://doi.org/10.1038/s41562-018-0508-z</u>

Rentfrow, P. J., & Gosling, S. D. (2003). The do re mi's of everyday life: The structure and personality correlates of music preferences. *Journal of Personality and Social Psychology*, 84, 1236–1256. <u>http://dx.doi.org/10.1037/0022-3514.84.6.1236</u>

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